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EXAMINER	
DIVECHA, KAMAL B	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/982,794	NI, SHIH-HSIUNG	
	Examiner	Art Unit	
	KAMAL B. DIVECHA	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-13 are pending in this application.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on 10/31/07 in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/07 has been entered.

Response to Arguments

Applicant's arguments in the submission filed on 10/31/07 with respect to claims 1-13 have been fully considered but they are not persuasive.

In the submission filed, applicant argues in substance that:

a. Applicant submits that there is no teaching or suggestion in Thompson of a packet that includes a plurality of cells, such that a header cell is one of the pluralities of cells, with the header cell including a header and packet information and including one header cell for the data packet. Thus, there is no teaching or suggestion in Thompson of modifying only the header cell of the packet in order to align all of the other cells of the packet (remarks, pg. 14, pg. 16-18).

In response to argument [a], Examiner cites Parruck to cure this deficiency, See the detailed response to argument [b].

Furthermore, as set forth in the previous office action dated 10/18/07, pg. 7, and in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., modifying only the header cell of the packet in order to align all of the other cells of the packet) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

b. Each of independent claims 1, 6 and 10 recites, in part, inserting null bytes into the header cell of the data packet to form a modified header cell of the data packet if the counter determines that the header cell of the data packet does not satisfy the multiple of the predetermined number of bytes and removing the null bytes from the modified header cell of the data packet as a modified cell of the data packet exists the network device. Thompson does not teach or suggest these features (remarks, pg. 15, pg. 17).

In response to argument [b], Examiner respectfully disagrees.

Applicant specification discloses:

[0002] The invention is related to a method and apparatus for high performance switching in a network such as token ring, ATM, fast Ethernet, Ethernet...In particular, the invention related to provide fixed sized cells bursts when the removal of a header having a variable length occurs.

[0005] A packet, in general...Thus, packet-switching scheme...In comparison, a cell, in the network terminology, is a fixed-length of data as opposed to a variable-length of data. Cells are basic unit of data transport used in protocols, such as ATM (Asynchronous Transfer Mode).

In other words, a data packet comprising a plurality of cells, wherein header cell of the data packet is one of the plurality of cells of the data packet and wherein the header cell of the plurality of cells comprises a header and packet data information is merely representing an ATM

environment and/or cell-based switching environment, wherein the data is transported through the basic unit of data transport known as cells.

Initially, applicant did in fact acknowledged and/or admitted that Thompson discloses a network adaptor aligning the headers of the header portion of the packet by inserting pad bytes into the header, for example: remarks, pg. 11, 15.

Independent claim 1, 6 and 10 stands rejected as follows:

As per claim 1, Thompson discloses a network device configured to prevent data misalignment of a data packet containing extra header bytes (col. 1 L25-38), the network device comprising:

an ingress module having an input interface to receive the data packet, wherein the data packet comprises a header and packet data information (col. 1 L25-30, col. 11 L26-32, applicant admitted prior art, AAPA, pg. 4 [0008]);

a header detector configured to detect a header of the data packet and remove the header from the data packet (col. 11 L51 to col. 12 L10, AAPA pg. 4 [0008]);

an insertion module configured to insert null bytes into the header of the data packet to form a modified data packet if the CPU determines that the header/data split is not on an even byte boundary (i.e. the number of bytes contained in data portion is even, multiple of predetermined bytes is an even number or odd, and the alignment must be corrected by processor 15 by inserting null bytes into the header of the cell (col. 12 L28-36, col. 1 L25-34; col. 5 L10-15, L29-37; fig 9; col. 4 L34-37: i.e. if the header/data split is not even, pad bytes or null bytes are inserted to correct the alignment)); and

an extraction module configured to remove the null bytes from the modfied header of the data packet as a modified data packet exits the network device (col. 6 L35-46).

However, Thompson does not disclose a data packet comprising a plurality of cells including a header cell, wherein the header cell of the plurality of cells comprises a header and packet data portion (i.e. a typical ATM environment) and a counter to determine whether the header cell of the data packet contains a multiple of a predetermined number of bytes after the header has been removed from the header cell.

Scott, from the same field of endeavor discloses a network device comprising: an ingress module having an input interface to receive a cell of the data packet (col. 10 L15-21); an egress module having output interface to output the cells (col. 10 L27-30); a header detector configured to detect a header of the cell of the data packet and remove the header from the cell of the data packet (col. 10 L22-23, L54-55); a counter to determine and/or count the number of octets of the user data PDU of the payload; and an insertion module that adds pad characters to make the frame or cell equal an integer number of 48 octet cells (i.e. inserting null bytes if the frame or cell does not satisfy an integer number of 48 octet i.e. if it does not satisfy the multiple number of the predetermined number of bytes, an even number, col. 10 L40-50, fig. 5C item #236).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Thompson in view of Scott, in order to include a counter that determines whether the cell of the data packet contains a multiple of a predetermined number of bytes after the header has been removed (i.e. a counter that counts number of bytes in the cell of the data packet), since Scott teaches and discloses a counter that counts data octets of the user data PDU of the payload and adding pad characters to make the frame equal an integer number of an even number of 48 octet cells.

One of ordinary skilled in the art would have been motivated because it would have determined and/or counted the number of bytes in a cell (Scott, col. 10 L40-50) and based on the determination it would have inserted the pad byte into the cell in order to align the headers and the cell (Thompson, col. 1 L25-38).

However, Thompson in view of Scott does not disclose a data packet comprising a plurality of cells including a header cell, wherein the header cell of the plurality of cells comprises a header and packet data information and wherein the header cell includes header in its entirety for the data packet (please note: Scott inherently discloses the limitation because Scott is related to ATM networks, however, in order to establish the proper prima facie case, Parruck has been introduced).

Parruck, from the same field of endeavor explicitly discloses a data packet comprising a plurality of cells including a header cell, wherein the header cell of the plurality of cells comprises header and packet data information, wherein the header cell includes the header in its entirety for the data packet (col. 1 L64 to col. 2 L9, col. 11 L5-19, col. 17 L6-64, col. 25 L58 to col. 26 L43: i.e. Parruck discloses preventing misalignment in ATM networks and MPLS network, fig. 41-42: Switch packet comprising switch header, i.e. header cell and plurality of data cells).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Thompson in view of Scot and further in view of Parruck, in order to prevent misalignment in an ATM networks.

One of ordinary skilled in the art would have been motivated because it would have prevented misalignment of the data packet and/or header cell in an ATM network (Parruck, col. 30 L49 to col. 31 L17).

Thompson and The process of Preventing Data Misalignment

Initially, Thompson discloses a network device configured to prevent data misalignment of a data packet containing extra header bytes (See col. 1 L25-38), as acknowledged by the applicant, See remarks, pg. 11-12.

Moreover, Thompson teaches the process of receiving a data packet having header and data portion, removing the header off the data packet and performing alignment of network header by inserting the pad or null bytes in the header to cause the header in the network packet to be aligned along predetermined multi-byte boundaries, i.e. adding pad bytes when it is determined that the header cell, i.e. cell does not satisfy the predetermined multi-byte boundaries (thus, resulting in a modified header) (col. 1 L25-54, col. 3 L1 to col. 4 L50), as explicitly acknowledged by the applicant, See remarks, pg. 11-12.

As indicated in the rejection, Thompson practices the invention in a network environment such as network 30 (col. 1 L25-54, fig. 2).

However, Thompson does not disclose the system wherein the network 30 is an ATM network, which is explicitly known to utilize cell-based routing of data packets.

Parruck et al. and The ATM Network and/or protocol OR The Packet-switched network

Parruck utilizes packet-switching and/or cell-based lower level protocol for transporting IP packets over a network, wherein the protocol is the Asynchronous Transfer Mode (ATM) (See col.1 L25-66), as acknowledged by the applicant, See remarks pg. 13, 2nd paragraph.

In ATM, all packets are of equal length. They are therefore called "cells". A large IP packet is transported over an ATM network by segmenting the large IP packet into a plurality of

smaller pieces, i.e. dividing the packets into plurality of cells. Each of smaller pieces is packaged to become an ATM cell. The ATM cells are then transported across the ATM network. When the ATM cells reach the edge of the ATM network, **their payloads are reassembled to reform the large IP packet** (Parruck, col. 1 L64 to col. 2 L10). An IP packet includes a single header for the entire data packet comprising plurality of cells as shown in the reproduced figure below: for example: item #414, 417, 420 and 434 [See Also applicant's fig. 3A step #205 and 210 in comparison].

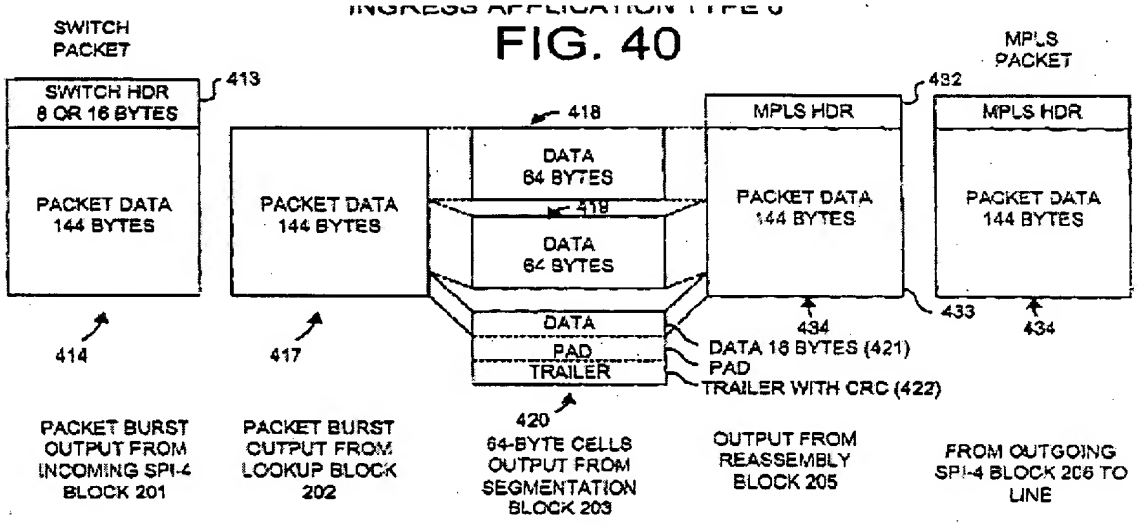

FIG. 40

FLOW #1
EGRESS APPLICATION TYPE 14

FIG. 41

At column 17 lines 5-64, Parruck discloses the process of receiving an ATM cell, wherein the ATM cell includes an ATM header 309 and a data payload 311.

In other words, Parruck discloses a network device, such as a router/switch (fig. 1, fig. 2 and fig. 4, col. 2 L37-57), wherein the data packet comprising plurality of cells are received, and wherein a header cell of the data packet is one of the plurality of cells of the data packet, i.e. header cell is equivalent to a cell of a data packet, and wherein the header cell of the plurality of

cells comprises a header and packet data information, see col. 17 L6-64 and fig. 20, and wherein the header cell includes the header in its entirety for the data packet, for example: fig. 41 item #414 and 418.

In other words, a switch packet, i.e. a data packet, comprises plurality of cells including the header cell in its entirety, i.e. a single header for the data packet comprising 64 byte cells.

Moreover, "a data packet comprising plurality of cells…wherein...wherein...and wherein..." is utilized in either ATM network and/or packet-switched network such as Ethernet, Fast Ethernet, etc., which are explicitly disclosed in the combination of Thompson and Parruck as set forth above [See Also, Applicant's Field of Invention [0002]].

Scott et al. and The Counter

Thompson teaches and discloses the process of receiving a data packet having header and data portion, removing the header off the data packet and performing alignment of network header by inserting the pad or null bytes in the header to cause the header in the network packet to be aligned along predetermined multi-byte boundaries, i.e. adding pad bytes when it is determined that the header cell, i.e. cell does not satisfy the predetermined multi-byte boundaries.

Stated another way, Thompson, initially, does suggest the usage of a counter that determines whether the header cell of the data packet contains and/or satisfies the predetermined multi-byte boundaries through the process of performing alignment of network header by inserting the pad or null bytes in the header to cause the header in the network packet to be aligned along predetermined multi-byte boundaries.

However, Thompson is not relied upon to teach and disclose a counter as in claims.

Scott discloses a network device comprising: an ingress module having an input interface to receive a cell of the data packet (col. 10 L15-21); an egress module having output interface to output the cells (col. 10 L27-30); a header detector configured to detect a header of the cell of the data packet and remove the header from the cell of the data packet (col. 10 L22-23, L54-55); a counter to determine and/or count the number of octets of the user data PDU of the payload; and an insertion module that adds pad characters to make the frame or cell equal an integer number of 48 octet cells (i.e. inserting null bytes if the frame or cell does not satisfy an integer number of 48 octet i.e. if it does not satisfy the multiple number of the predetermined number of bytes, an even number, col. 10 L40-50, fig. 5C item #236).

In other words, Scott teaches and discloses a counter as in claims 1-13.

By applying the combination of Thompson and Scott to a system and network as in Parruck, i.e. applying Thompson and Scott to a network environment such as ATM network/protocol and/or to a packet-based switching environment, the combination would result in a process of inserting null bytes into the header cell including header in its entirety for the data packet to form a modified header cell of the data packet if the counter determines that the header cell of the data packet does not satisfy the multiple of the predetermined number of bytes and removing the null bytes from the modified header cell of the data packet as a modified cell of the data packet exists the network device.

As such, the combination of Thompson, Scott and Parruck does teach, disclose and suggest the subject matter as in independent claims 1, 6 and 10.

For the at least these reasons, the rejection is maintained.

Claim Interpretation

For examination purposes, the network devices of claim 1 and claim 10 are interpreted as physical network device(s).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claim 1 is reproduced herein:

> A network device configured to prevent data misalignment of a data packet containing extra header bytes, the network device comprising:
> an ingress module having an input interface to receive a data packet comprising a plurality of cells wherein the a header cell of the data packet is one of the plurality of cells of the data packet, wherein the header cell of the plurality of cells comprises a header and packet data information and wherein the header cell includes the header in its entirety for the data packet;
> a header detector configured to detect the header cell of the data packet and remove the header from the header cell of the data packet;
> a counter configured to determine whether the header cell of the data packet contains a multiple of a predetermined number of bytes after the header has been removed from the header cell;
> an insertion module configured to insert null bytes into the header cell of the data packet to form a modified header cell of the data packet if the counter determines that the header cell of the data packet does not satisfy the multiple of the predetermined number of bytes; and
> an extraction module configured to remove the null bytes from the modfied header cell of the data packet as a modified cell of the data packet exits the network

Applicant's Background Information discloses:

> [0004] A packet is a unit of data that is routed between a source and a destination network over the Internet or any other packet-switched network...when any file (i.e. email message, html file...) is sent from...via the Internet, the TCP/IP may divide the file into packets...
> [0005] A packet, in general, loosely defines a block of variable-length data. Thus, packet switching scheme may be an efficient way to handle transmissions...In comparison, a cell, in the network terminology, is a fixed-length of data as opposed to variable-length of data. Cells are basic unit of data transport used in protocols, such as ATM...

In light of these teachings, it is unclear whether the "data packet comprising plurality of cells, wherein a header cell of the data packet is one of the plurality of cells of the data packet, wherein the header cell of the plurality of cells comprises a header and packet data information and wherein the header cell includes the header in its entirety for the data packet" are referring to packets in packet switching environment OR to cells in the cell-based switching environment.

The teachings of a packet and a cell are distinct in the art, as evidenced by the applicant specification.

As such, the scope of the claims and/or the metes and bounds of the claims remains unascertainable and/or unclear.

Applicant is advised to take appropriate action.

Claims 2-13 are rejected for the same reasons as set forth in claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 6-8 and 10-12 are rejected under 35 U.S.C. 103(a) as being obvious over Thompson, Michael I. (herein known as Thompson, EP 0 572 145 A2) in view of Scott (U. S. Patent No. 6,512,773 B1), and further in view of Parruck et al. (hereinafter Parruck, U. S. Patent No. 7,139,271 B1).

As per claim 1, Thompson discloses a network device configured to prevent data misalignment of a data packet containing extra header bytes (col. 1 L25-38), the network device comprising:

an ingress module having an input interface to receive the data packet, wherein the data packet comprises a header and packet data information (col. 1 L25-30, col. 11 L26-32, applicant admitted prior art, AAPA, pg. 4 [0008]);

a header detector configured to detect a header of the data packet and remove the header from the data packet (col. 11 L51 to col. 12 L10, AAPA pg. 4 [0008]: conventional data packet includes one header for the entire data packet);

an insertion module configured to insert null bytes into the header of the data packet to form a modified data packet if the CPU determines that the header/data split is not on an even byte boundary (i.e. the number of bytes contained in data portion is even, multiple of

predetermined bytes is an even number or odd, and the alignment must be corrected by processor 15 by inserting null bytes into the header of the cell (col. 12 L28-36, col. 1 L25-34; col. 5 L10-15, L29-37; fig 9; col. 4 L34-37: i.e. if the header/data split is not even, pad bytes or null bytes are inserted to correct the alignment)); and

an extraction module configured to remove the null bytes from the modified header of the data packet as a modified data packet exits the network device (col. 6 L35-46).

However, Thompson does not disclose a data packet comprising a plurality of cells, wherein a header cell of the data packet is one of the plurality of cells of the data packet and wherein the header cell of the plurality of cells comprises a header and packet data portion (i.e. a typical ATM environment, wherein the data packet is segmented into plurality of smaller pieces known as ATM cells) and a counter to determine whether the header cell of the data packet contains a multiple of a predetermined number of bytes after the header has been removed from the header cell.

Scott discloses a network device comprising: an ingress module having an input interface to receive a cell of the data packet (col. 10 L15-21); an egress module having output interface to output the cells (col. 10 L27-30); a header detector configured to detect a header of the cell of the data packet and remove the header from the cell of the data packet (col. 10 L22-23, L54-55); a counter to determine and/or count the number of octets of the user data PDU of the payload; and an insertion module that adds pad characters to make the frame or cell equal an integer number of 48 octet cells (i.e. inserting null bytes if the frame or cell does not satisfy an integer number of 48 octet i.e. if it does not satisfy the multiple number of the predetermined number of bytes, an even number, col. 10 L40-50, fig. 5C item #236).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Thompson in view of Scott, in order to include a counter that determines whether the cell of the data packet contains a multiple of a predetermined number of bytes after the header has been removed (i.e. a counter that counts number of bytes in the cell of the data packet), since Scott teaches and discloses a counter that counts data octets of the user data PDU of the payload and adding pad characters to make the frame equal an integer number of an even number of 48 octet cells.

One of ordinary skilled in the art would have been motivated because it would have determined and/or counted the number of bytes in a cell (Scott, col. 10 L40-50) and based on the determination it would have inserted the pad byte into the cell in order to align the headers and the cell (Thompson, col. 1 L25-38).

However, Thompson in view of Scott does not disclose a data packet comprising a plurality of cells including a header cell, wherein the header cell of the plurality of cells comprises a header and packet data information and wherein the header cell includes the header in its entirety for the data packet (please note: Scott inherently discloses the limitation because Scott is related to ATM networks, however, in order to establish a proper prima facie case, Parruck has been introduced).

Parruck explicitly discloses a data packet comprising a plurality of cells, wherein the header cell of the data packet is one of the plurality of cells of the data packet, wherein the header cell of the plurality of cells comprises header and packet data information (col. 1 L64 to col. 2 L9, col. 11 L5-19, col. 17 L6-64, fig. 20, col. 25 L58 to col. 26 L43: i.e. Parruck discloses preventing misalignment in ATM networks, wherein ATM network is a cell-based routing

network and MPLS network), and wherein the header cell includes the header in its entirety for the data packet (fig. 41, col. 1 L64 to col. 2 L10, fig. 60J, 60H) [note that applicant's invention either utilizes packet switching scheme and/or cell-based switching scheme, and Parruck teaches both of these schemes or environment, e.g. col. 1 L26 to col. 2 L9, col. 4 L5-58).

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Thompson in view of Scot and further in view of Parruck, in order to prevent misalignment in an ATM networks.

One of ordinary skilled in the art would have been motivated because it would have prevented misalignment of the data packet and/or header cell in an ATM network (Parruck, col. 30 L49 to col. 31 L17).

As per claim 2, Thompson in view of Scott and further in view of Parruck discloses the network device wherein the network device comprises an aggregator that interfaces with an Ethernet and a SPI-4 system (Parruck, col. 31 L20-56, fig. 1, fig. 4, fig. 27). One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 1.

As per claim 3, Thompson in view of Scott and further in view of Parruck discloses the network device configured to interface between twelve 1-gigabit ports and one 12 Gigabit/s SPI-4 interface (Parruck, col. 31 L20-56, fig. 1, fig. 4, fig. 27: please note the port speed and uplink speed may vary, however various modules are available with various speeds or bandwidth). One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 1.

As per claim 4, Thompson in view of Scott and further in view of Parruck discloses the system wherein the network device is a network switch (Parruck, fig. 2, fig. 4, fig. 9, col. 10 L1-

25). One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 1.

As per claim 6, Thompson further discloses forwarding the modified cell of the data packet to an output port (col. 6 L30-46). Therefore, claim 6 is rejected for the same reasons as set forth in claim 1 above.

As per claims 7, 8 and 10-12, they do not teach or further define over the limitations in claims 1-4 and 6. Therefore, claims 7, 8 and 10-12 are rejected for the same reasons as set forth in claims 1-4 and 6.

3. Claims 5, 9 and 13 are rejected under 35 U.S.C. 103(a) as being obvious over Thompson, Michael I. (herein known as Thompson, EP 0 572 145 A2) in view of Scott (U. S. Patent No. 6,512,773 B1), further in view of Parruck et al. (hereinafter Parruck, U. S. Patent No. 7,139,271 B1), and further in view of Yik et al. (U. S. Patent No. 6,697,873 B1).

As per claim 5, Thompson, Scott and Parruck disclose the network device comprising a layer two switching module configured to build a table of forwarding rules (Parruck, Parruck, fig. 2, fig. 4, fig. 9, col. 10 L1-25) and configured to instruct the extraction module to remove the null bytes from the modified cell of the data packet as the modified cell of the data packet exits the network device (Thompson, col. 6 L35-46; Parruck, col. 1 L64 to col. 2 L9, col. 11 L5-19, col. 17 L6-64, col. 25 L58 to col. 26 L43), however, Thompson, Scott and Parruck does not disclose a medium access control protocol module having a MAC address for transmitting the modified cell of the data packet and a layer two switching module configured to build a table of forwarding rules upon which the MAC addresses exist.

Yik explicitly discloses an apparatus comprising a medium access control protocol module having a MAC address for transmitting the modified cell of the data packet and a frame-forwarding device including MAC address tables (i.e. a layer two switching module building a forwarding table based on MAC addresses, see abstract, fig. 2, fig. 6, fig. 7A and col. 2L20-31, col. 4 L33-67).

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Yik as stated above with Thompson, Scott and Parruck in order to include a MAC module for transmitting the modified cell of the data packet and a layer two switching module for building a forwarding table.

One of ordinary skilled in the art would have been motivated because it would have increased the performance of the network by forwarding the frames to the correct output port associated with the particular MAC address (Yik, col. 2 L20-31).

As per claim 9 and 13, they do not teach or further define over the limitations in claim 5. Therefore, claims 9 and 13 are rejected for the same reasons as set forth in claim 5.

Additional References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Mizutani et al., U. S. Patent No. 5,974,466: ATM controller.

b. Bakke et al., U. S. Patent No. 5,566,170: Method and Apparatus for accelerated packet forwarding.

Conclusion

This Action is made Non-Final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is (571)272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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